
PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Evaluate The Feasibility For Anadromous Fish Reintroduction In The Owyhee

BPA project number: 20093

Contract renewal date (mm/yyyy): ☒ **Multiple actions?**

Business name of agency, institution or organization requesting funding

Shoshone-Paiute Tribes of the Duck Valley Indian Reservation

Business acronym (if appropriate)

Sho-Pai Tribes - DVIR

Proposal contact person or principal investigator:

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NPPC Program Measure Number(s) which this project addresses

Section (§) 2.1; §2.1A.1 ; §2.2A ; §2.2E6; §2.2F1; §2.2H; §7.10K; §10.1E; §10.8C; and, § 11.5A.

FWS/NMFS Biological Opinion Number(s) which this project addresses

FERC relicensing considerations of the Hells Canyon Complex relative to the 1999 FCRPS (Hydropower Operations) Biological Opinion (NMFS)

Other planning document references

CBFWA-Resident Fish Managers (1997) Multi-Year Implementation Plan
Federal MOA on Bonneville Power Administration Fish & Wildlife restoration funding
Department of Energy / BPA Tribal Policy
State of Idaho and State of Nevada Fish Management Plans affecting the Owyhee Basin
Independent Scientific Group (1996) Return to the River / (1997) Review of Columbia Basin Fish and Wildlife Program
NPPC Regional Multi-Species Framework Project/Process/Documents

Short description

Evaluate the feasibility of reintroducing anadromous salmon and steelhead into the Upper Snake River and Owyhee River Basin – above the Hells Canyon Complex – and develop alternatives for utilization of anadromous fishes by the Shoshone-Paiute Tribe.

Target species

Anadromous salmon and steelhead (reintroduction and/or off-site mitigation).

Section 2. Sorting and evaluation

Subbasin

Owyhee

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input checked="" type="checkbox"/> Anadromous fish <input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input type="checkbox"/> Multi-year (milestone-based evaluation) <input type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Watershed councils/model watersheds <input type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input checked="" type="checkbox"/> Research & monitoring <input checked="" type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description
20536	Develop Management Plan & Assess Fish & Wildlife Of The Owyhee Basin, DVIR
20040	Develop a Fish & Wildlife Management Plan for the Owyhee Basin, DVIR
20041	Develop a Fish & Wildlife Conservation Law Enforcement Plan, DVIR
20094	Fish Assess Resident Fish Stocks Of The Owyhee Basin, DVIR
9701100	Enhance and Protect Habitat and Riparian Areas on DVIR
	Implement Fishery Stocking Program Consistent with Native Fish Conservation
20092	Inventory Wildlife Species & Populations Of The Owyhee Basin, DVIR
20093	Evaluate the Feasibility for Anadromous Fish Reintroduction in the Owyhee

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
9701100	Enhance and Protect Habitat & Riparian Areas on the Duck Valley Indian Res	Habitat enhancement is a critical need for comprehensive fish & wildlife management of the Owyhee Basin DVIR
9501500	Lake Billy Shaw Wetlands Catch & Release Fishery O&M	A new BPA- funded reservoir was completed in 1998 on the DVIR -- the development of its fisheries needs to be integrated within a comprehensive fish management plan.
8815600	Stocking Fish in Lakes and Streams on the Duck Valley Indian Reservation	Stocking of hatchery trout in reservoirs and streams has been implemented for many years to provide fisheries and economic benefits to the DVIR -- this program needs to be re-evaluated & integrated in the rationale of a comprehensive fish management plan.
9500600	Shoshone-Bannock/Shoshone-Paiute Joint Culture Facility	A BPA-funded fish culture facility is being developed to provide trout production to supplement fisheries on Duck Valley and Fort Hall reservations. Its operation should

		be coordinated with the comprehensive Owyhee Basin resident fish management plan.

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
	New Project -- Not Applicable	

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Objective 1. Evaluate the institutional constraints & legal opportunities for reintroducing anadromous salmon and steelhead into the Upper Snake River above the Hells Canyon complex.	a	Engage the Columbia Basin Regional process relative to the Shoshone-Paiute Tribes' vision for reintroduction of anadromous salmonids into the "Blocked Area" above the Hells Canyon Complex – specifically the Owyhee Basin.
		b	Research the legal responsibilities of the Northwest Power Planning Council pursuant to the Power Act and the Idaho Power Company pursuant to FERC re-licensing – relative to mitigation for anadromous salmonid losses in the Owyhee Basin, DVIR.
2	Evaluate the biological & technological feasibility of reintroducing anadromous salmon and steelhead into the Owyhee River Basin.	a	Review available data and documents to estimate the extent of lost anadromous fish production in the Owyhee Basin.
		b	Evaluate various conventional methods and options for reestablishment of the viability entire life cycle of salmonids within the paradigm of restoring the connectivity and health of its "normative" pre-dam riverine ecosystem.
		c	Evaluate alternatives outside the box (i.e., the "natural system restoration paradigm") - - for reintroduction of anadromous fishes and/or mitigation for their losses.

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	1/2000	12/2001	Increased anadromous fish production / utilization in the Upper Snake River.		60.00%
2	1/2000	12/2001	Increased anadromous fish production / utilization in the Owyhee Basin.		40.00%
				Total	100.00%

Schedule constraints

FERC relisencing schedule for the Hells Canyon Complex

Completion date

2001

Section 5. Budget

FY99 project budget (BPA obligated): \$0

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel	Director 0.33 FTE	%35	20,000
Fringe benefits	@30%	%12	6,600
Supplies, materials, non- expendable property		%0	
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	
PIT tags	# of tags: (none)	%0	
Travel	regional & coordination meetings	%13	7,500
Indirect costs	@26.6%	%16	9,071
Subcontractor	(a) legal council (b) fisheries consultant	%24	13,680
Other		%0	
TOTAL BPA FY2000 BUDGET REQUEST			\$56,851

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
	None available at this time	%0	
		%0	
		%0	

		%0	
Total project cost (including BPA portion)			\$56,851

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	\$58,557			

Section 6. References

Watershed?	Reference
<input type="checkbox"/>	{Refer to the umbrella proposal ShopaiGD1.doc}
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

PART II - NARRATIVE

Section 7. Abstract

The purpose of this project is to evaluate the feasibility of reintroducing anadromous salmon and steelhead into the Upper Snake River and Owyhee River Basin – above the Hells Canyon Complex – as mitigation to the Shoshone-Paiute Tribe for lost salmonid production caused by dam construction and operation. We will review available data and documents to estimate the extent of lost anadromous fish production in the Owyhee Basin. Various conventional methods and options for reestablishment of the viability entire life cycle of salmonids within the paradigm of restoring the connectivity and health of its “normative” pre-dam riverine ecosystem will be explored. Issues such as upstream adult passage, available spawning and rearing habitat in the Owyhee Basin, and downstream juvenile migration will be reviewed in the context of: (a) past management actions, (b) previous anadromous fish reintroduction schemes, (c) recent mitigation measures & management actions implemented in other areas, (d) legal responsibilities of Idaho Power Company pursuant to FERC re-licensing, (e) possible passage & watershed restoration solutions from the current scientific literature, and (f) results of ongoing fish & habitat enhancement work in the Owyhee Basin. The feasibility study would also explore alternatives outside the natural system restoration box; for example: a more rigorous resident fish substitution program; re-introduction of surplus (live) lower river hatchery salmonid brood stock for “trophy” fisheries in DVIR reservoirs; direct allocation of processed salmon from hatchery returns; off-site mitigation fisheries for the Tribal members below Hells Canyon Dam; and monetary settlements for the Shoshone-Paiute Tribe.

Section 8. Project description

a. Technical and/or scientific background

An overall description of *technical and scientific background* for comprehensive fish & wildlife enhancement on the Duck Valley Indian Reservation is provided in the “umbrella” proposal form – ShopaiGD1.doc. The additional project-specific information relating to the sub-proposal to -- *Evaluate the Feasibility for Anadromous Fish Reintroduction in the Owyhee River System* -- follows.

The Duck Valley Indian Reservation is located in southern Idaho and northern Nevada. The Owyhee River enters the Reservation at the southeast corner in Nevada and exits in the northwest corner of the Reservation in Idaho, continuing into Oregon where it enters the Snake River. The surface water resources

of the Reservation consists of the Owyhee River, two man-made lakes, over 350 miles of tributary streams, approximately 200 man-made or natural stock water ponds and springs, and a newly completed dam and reservoir in the Billy Shaw slough area. Mary's Creek, tributary to the Bruneau River, has an annual flow of about 13,500 acre feet of water in which leaves the Reservation on the Northeast corner into CJ Strike Reservoir.

The entire Owyhee Basin – encompassing the Duck Valley Indian Reservation (DVIR) -- is classified as a “*Blocked Area*” in the NPPC Fish and Wildlife Program (NPPC 1995; Section 10.8). The Owyhee Basin is in the upper Snake River Basin -- upstream from the Hells Canyon Complex that has completely blocked anadromous fish migrations for over 40 years (Hells Canyon Dam 1967; Oxbow Dam 1961; Brownlee Dam 1958). Prior to hydropower development the Owyhee Basin supported a large diverse community of native anadromous and resident fish populations. The complete extirpation of anadromous fish stocks from this area reduced the native salmonid species assemblage and greatly impacted the culture, religion and livelihood of the Shoshone and Paiute tribes that were dependent upon the once abundant anadromous fish resource. Resident fish and wildlife species in the subbasin were also impacted through lost productivity (absence of nutrient component attributable to anadromous fish) and habitat degradation relating to land-use practices (agriculture, grazing, logging, mining and municipal development) facilitated by hydropower development in the region.

Owyhee River Basin fish populations now consist of both native resident species (e.g., redband trout & bull trout) and remnants of hatchery reared salmonids (e.g., rainbow trout, cutthroat trout and brook trout) (IDFG 1996). Since the 1950's hatchery trout were introduced into DRIR waters on an annual basis; these “put-and-take” fisheries (primarily in reservoirs) currently provide the only harvest opportunities for Tribal members (Burge and Miller 1990).

To date the Shoshone-Paiute Tribe has received relatively little mitigation for the tremendous loss of anadromous salmonids and resident fish & wildlife caused by dam construction in the Upper Snake River – compared to what has been spent in other subbasins and the potential production of the Owyhee River system. Since 1988, BPA has provided funds for the purchase of hatchery trout for stocking two reservoirs on the DVIR (i.e., Sheep Creek and Mountain View) and has paid for the construction of a new dam and reservoir to enhance resident trout fisheries on the reservation. The only other significant mitigation effort is the recently funded riparian habitat restoration project.

FERC re-licensing is currently underway for the Hells Canyon Complex. In a statement by Idaho Fish and Game (IDFG) with regard to the re-licensing process, they stated that the feasibility of reintroduction of anadromous fish above Hells Canyon should be examined (IDFG 1997). This is the last chance the Shoshone-Paiute Tribes will have to do evaluate the feasibility of reintroduction of anadromous salmonids above the Hells Canyon Complex for the next 40 years – because when the Idaho Power Company obtains its FERC license it can resume status quo operations. If changes are not considered now in regards to the operation of the upper Snake River dams relative to anadromous fish passage -- the Tribes may permanently lose their cultural heritage and traditional way of life depended on salmon and steelhead for sustenance.

In 1989, the Honorable U.S. Senator James McClure initiated a workshop to evaluate the possibility of reintroducing salmon and steelhead above Hells Canyon Dam in the middle Snake River. The conclusion

from the workshop was that reintroduction of anadromous fish runs could be possible, provided three prerequisites are met (Armour 1990):

- ◆ Smolt passage problems at existing lower Snake and the Columbia River dams must be solved;
- ◆ Flows in the lower Snake River reservoirs must be improved to enable successful smolt passage; and,
- ◆ A reintroduction program must not be at the expense of existing fishery programs in the Snake and Columbia rivers.

Since 1991, the stumbling blocks related to the lower Snake River dam passage problems, identified at the reintroduction workshop, are being addressed by NMFS in the FCRPS Biological Opinions (and corresponding increases in funding by BPA to address reasonable and prudent alternatives) pursuant to ESA listings of Snake River salmon stocks. It is now time to address the real biological, technological and societal issues related to the feasibility of reintroducing salmon and steelhead above Hells Canyon Dam.

In the regional Multi-Species framework process the Upper Columbia River Tribes are also considering reintroduction of anadromous salmonids into the blocked area above Chief Joseph and Grand Coulee dams (Kalispel Tribe et al. 1998). The Upper Columbia River fish managers have defined two alternative visions for the currently Blocked Area:

- (1) Development of a stable, locally adapted Upper Columbia River ecosystem capable of naturally producing sustainable resident fish populations and harvest, equal to the level of historical (pre-dam) conditions, and/or
- (2) Re-introduction of anadromous salmon and steelhead runs above Chief Joseph and Grand Coulee dams to restore anadromous and resident fish abundance and harvest to historical levels.

Two alternative strategies are proposed to accomplish these visions:

- (1) A comprehensive mitigation program of native resident fish restoration and native/non-native fish substitution; i.e., continuation and enhancement of the policies, goals and objectives documented in the Power Planning Council's 1995 Fish & Wildlife Program and the Columbia Fish & Wildlife Authority's (1997) Multi-Year Implementation Plan.
- (2) Develop adult and juvenile anadromous fish passage capabilities – exploring all possible engineering, technological, and societal means -- to circumvent the current barriers to anadromous salmon & steelhead migration at Chief Joseph and Grand Coulee dams. Concurrently re-introduce fish species and stocks that genetically and behaviorally resemble the assemblages present before the construction of the Upper Columbia River dams.

b. Rationale and significance to Regional Programs

An overall description of *rationale and significance to regional programs* is provided in the “umbrella” proposal form – ShopaiGD1.doc. The following sections (§) of the Council's Fish & Wildlife Program address fundamental issues related to anadromous salmonid reintroduction into the Owyhee River system:

- ◆ assessing feasibility of reintroduction of anadromous fishes past passage barriers into historical habitat (§7.10K);
- ◆ assessment of trade-offs with anadromous fish and wildlife activities (§10.1E);
- ◆ mitigation for lost salmon production in blocked areas above the Hells Canyon dam complex (§10.8C); and,
- ◆ wildlife mitigation considerations in dam licensing decisions, i.e. FERC (§ 11.5A).

Brief summaries of the specific sections (§) from the Council's Fish and Wildlife Program (NPPC 1995) relating directly and indirectly to this anadromous salmonid reintroduction sub-proposal -- “*Evaluate the Feasibility for Anadromous Fish Reintroduction in the Owyhee*” -- are presented below:

§ 2.1: Systemwide Goal: A healthy Columbia River Basin.

§ 2.1A: Assess ecological health of Columbia River Basin.

§ 2.1A1: Explore methods to assess trends in ecosystem health.

§ 2.2A: Support native species in native habitats.

§ 2.2H: The need to learn from implementation (monitoring & evaluation).

§ 2.2E6: Criteria for establishing constraints on hydroproject operations, including (a) protection and rebuilding of weak native fish stocks and resident fish substitutions, (b) protection of tribal rights to fish at usual and accustomed fishing places and ceded areas.

§ 7.1B: Conserve genetic diversity

§ 7.1C: Collection of population status, life history and other data on wild and naturally spawning populations.

§ 7.10K: Passage into historic habitat.

§ 7.10K1: Where appropriate, determine the feasibility of providing passage above blockages to habitat caused by human development activities. Appropriate habitat includes areas where weak stocks are habitat limited and, therefore, would benefit from additional habitat.

§ 10.1: Resident fish goal – The program goal for resident fish emphasizes the long-term sustainability of native fish in native habitats where possible. Use strategies of mitigation & substitution.

§ 10.1E: Project Implementation and selection

- Documentation of resident fish losses attributable to the FCRPS;
- adaptive management principles, and appropriate monitoring and evaluation efficacy;
- coordination with fish and wildlife agencies and tribes;
- compliance with the Program policies;
- achievement of biological results;
- assessment of trade-offs with anadromous fish and wildlife activities;
- development of a management plan with sound biological objectives;
- consultation and coordination with interested parties;
- estimated costs and a schedule for implementation and evaluation; and
- fulfillment of standards of the Northwest Power Act.

§10.2A1: Address resident fish as well as anadromous fish in developing a plan for genetic diversity as called for in measure 7.1.D.1.

§ 10.2B: Comprehensive Watershed Management

Good habitat is important for resident fish, just as it is for anadromous fish. The degraded condition of resident fish habitat in the Columbia River Basin often rivals that of anadromous fish. For this reason, the program provisions noted in § 7.7 (Cooperative Habitat Protection and Improvement with Private Landowners) should also apply to resident fish.

§ 10.5B: Study and Evaluate Native Salmonid Populations Above Hells Canyon Dam

§ 10.8: Resident fish substitutions.

Salmon and steelhead probably never will be able to return to some areas of the basin because of blockages by dams. These include the areas above Chief Joseph and Grand Coulee dams and the Hells Canyon Complex, as well as other smaller blocked areas. In its analysis of the contribution of the hydropower system to salmon and steelhead losses, the Council has addressed the extent to which resident fish substitutions should be used to mitigate losses of salmon and steelhead production in these areas.

The Council has concluded that: 1) mitigation in blocked areas is appropriate where salmon and steelhead were affected by the development and operation of the hydroelectric projects; 2) to treat the Columbia River and its tributaries as a system, resident fish substitutions are reasonable for lost salmon and steelhead in areas where in-kind mitigation cannot occur; and 3) flexibility in approach is needed to develop a program that complements the activities of the fish and wildlife agencies and tribes and is based on the best available scientific knowledge. For substitution purposes, resident fish may include landlocked anadromous fish (e.g., white sturgeon, kokanee and coho), as well as traditionally defined resident fish species.

§ 10.8A: Resident Fish Substitutions Policy

The substitution of resident fish to make up for losses of anadromous fish in areas now permanently blocked to salmon and steelhead reflects the Council's resolve to address complex, long-term problems. Historical records show that the Columbia River Basin Indian tribes relied extensively on salmon and steelhead, and the permanent loss of these resources has had incalculable impacts on tribal economies, cultures and religions. Historically, the Council approved projects in the areas above Chief Joseph/Grand Coulee, and in the blocked areas above Hell's Canyon Dam.

§ 10.8C: Resident Fish Substitution Projects Above Hells Canyon Dam

The following resident fish substitution activities and projects in the blocked area above Hells Canyon Dam will partially mitigate for salmon and steelhead losses incurred in this blocked area as a result of the construction and operation of hydropower projects in the Columbia River Basin.

§ 11.1: Wildlife Program goal: Fully mitigate for wildlife losses from hydropower in the Columbia River basin

§ 11.5A. Mitigation considerations in dam licensing decisions. (e.g., FERC).

c. Relationships to other projects

The following BPA-funded projects are ongoing during FY1999-2000 for resident fish mitigation and enhancement on the DVIR. The following summaries describe how these projects are interrelated with the proposed subproposal: *“Evaluate the Feasibility for Anadromous Fish Reintroduction in the Owyhee”*.

BPA-funded Project 8815600 “Stocking Fish in Lakes and Streams on the Duck Valley Indian Reservation” has been ongoing since 1988. Trout stocking required as mitigation for lost anadromous and resident fish production caused by the construction of the Hells Canyon Complex; it provides fishing opportunities for Tribal sustenance and income from non-tribal fishing fees. **As an alternative to resident fish substitution**, we propose to investigate the feasibility of reintroducing anadromous salmon and steelhead into the Upper Snake River and Owyhee River Basin – above the Hells Canyon Complex – and develop alternative options for utilization of anadromous fishes by the Shoshone-Paiute Tribe.

Project 9701100 “Enhance and Protect Habitat & Riparian Areas on the Duck Valley Indian Reservation” [NPPC measure 10.8C.5] Fish stocking should be conducted in appropriate waters with water quality and limnological conditions suitable for optimum growth and survival. Our ongoing study of existing habitat conditions within the Owyhee River watershed provides data needed to evaluate suitability of waters for anadromous salmonid spawning and rearing.

Project 9501500 “Lake Billy Shaw Wetlands Catch & Release Fishery O&M” [NPPC measure 10.8C; 10.8C4] A new BPA-funded dam was completed in 1998 on the DVIR and Lake Billy Shaw will begin filling in 1999 – selection of specific hatchery stocks and/or native species to stock into the reservoir -- for the development of its fisheries needs to be integrated within a comprehensive fish management plan. One option that should be evaluated is the introduction of adult salmon and/or steelhead (e.g., surplus broodstock trapped in the lower river hatcheries and trucked to DVIR) for subsistence fisheries for tribal members and put-and-take trophy fisheries for non-Indians.

Project 9500600 “Shoshone-Bannock/Shoshone-Paiute Joint Culture Facility” [NPPC measure 10.8C3; 10.8C6] A BPA-funded fish culture facility is being developed to provide trout production to supplement fisheries on Duck Valley and Fort Hall reservations. Its production plan & operation should be coordinated with the comprehensive Owyhee Basin resident fish management plan -- including Lake Billy Shaw fishery development. In the future, if anadromous salmonid reintroduction into the Owyhee River system is deemed feasible and implemented, the joint fish culture facility could be utilized, in part, to develop salmon and/or steelhead suitable for reintroduction –

i.e., stocks with a genetic composition similar to the original Owyhee Basin runs that were extirpated

Additional projects are proposed for FY 2000 -- under an umbrella proposal (ShopaiGD1.doc) -- that are relevant to the implementation of this fish stocking project:

Develop a Fish & Wildlife Management Plan for the Owyhee Basin, DVIR (ShopaiGD2.doc)

Developing a DVIR fishery management plan that includes adaptive management. The alternatives deemed feasible for anadromous fish reintroduction should be incorporated into this plan.

Develop a Fish & Wildlife Conservation Law Enforcement Plan, DVIR (ShopaiGD3.doc)

An effective Fisheries Enforcement Program would be needed if anadromous salmonids were reintroduced into the Owyhee River System.

Assess Resident Fish Stocks Of The Owyhee Basin, DVIR (ShopaiGD4.doc)

The proposed project will assess existing resident fish populations, including evaluation of genetic composition of naturally spawning stocks with respect to possible genetic introgression from introduced species and hatchery stocks. If anadromous salmonids are reintroduced into the Owyhee system, either as adults or juveniles, the impacts on native resident fish would be minimized by understanding the spatial and temporal distribution and ecology of resident populations.

d. Project history (for ongoing projects)

New Project – Not Applicable

e. Proposal objectives

The overall goal of the Shoshone-Paiute “umbrella project” (refer to ShopaiGD1.doc) is to coordinate a comprehensive Fish, Wildlife and Habitat Restoration Plan for the Duck Valley Indian Reservation -- including fish & wildlife management planning, fish stock assessment, and wildlife inventory of the Owyhee Basin, DVIR component. The specific objectives of this sub-proposal to reintroduce anadromous fish into the Owyhee River system are:

Objective 1. Evaluate the institutional constraints & legal opportunities for reintroducing anadromous salmon and steelhead into the Upper Snake River above the Hells Canyon complex.

Objective 2. Evaluate the biological & technological feasibility of reintroducing anadromous salmon and steelhead into the Owyhee River Basin.

f. Methods

The overall strategic planning and adaptive program management for an integrated suite of fish and wildlife enhancement projects on the Duck Valley Indian Reservation (DVIR) are described in the “umbrella project” (refer to ShopaiGD1.doc). It will incorporate two related approaches to achieve an integrated fish & wildlife management plan and project implementation based on scientific principles.

- ◆ First, develop an internally consistent and comprehensive Shoshone-Paiute strategic plan for the restoration of fish, wildlife, and watershed resources on the Duck Valley Indian Reservation.
- ◆ Second, coordinate with state, regional, and federal planning processes (e.g., Idaho & Nevada fish management plans, NPPC Fish & Wildlife Program, Multi-Species Framework, ESA recovery plans, etc.) to develop a management framework that maximizes opportunities cooperative efforts and successful restoration of the Owyhee ecosystem.

The specific methods employed in BPA Project 8815600 sub-proposal -- “*Implement Fishery Stocking Program Consistent with Native Fish Conservation*” -- are described in the following section, under the two primary objectives.

Objective 1. Evaluate the institutional constraints & legal opportunities for reintroducing anadromous salmon and steelhead into the Upper Snake River above the Hells Canyon complex.

- ◆ The Shoshone-Paiute Director of Habitat, Parks, Fish & Game will engage the Columbia Basin Regional process relative to the Shoshone-Paiute Tribes’ vision for reintroduction of anadromous salmonids into the “Blocked Area” above the Hells Canyon Complex – specifically the Owyhee Basin. The Director will seek cooperation from the anadromous and resident fish caucuses of CBFWA, NPPC staff and commission members, BPA management, and the Idaho Power Company.
- ◆ We will retain an attorney -- experienced with Indian Treaty Rights, Nevada & Idaho water resources law, and federal law -- to research the legal responsibilities of the Northwest Power Planning Council pursuant to the Power Act and the Idaho Power Company pursuant to FERC re-licensing – relative to mitigation for anadromous salmonid losses in the Owyhee Basin, DVIR.

Objective 2. Evaluate the biological & technological feasibility of reintroducing anadromous salmon and steelhead into the Owyhee River Basin.

We will hire a fisheries consultant to conduct a feasibility study of the biological & technological feasibility of reintroducing anadromous salmon and steelhead into the Owyhee River Basin. The study will include the following approaches:

A. Review and summarize available data and documents to estimate the anadromous fish losses and foregone harvest in the Upper Snake River with a focus on the Owyhee Basin.

B. Evaluate various conventional methods and options for reestablishment of the viability entire life cycle of salmonids within the paradigm of restoring the connectivity and health of its “normative” pre-dam riverine ecosystem will be explored. Issues such as upstream adult passage, available spawning and rearing habitat in the Owyhee Basin, and downstream juvenile migration will be reviewed in the context of:

- ◆ past management actions and failed attempts to provide anadromous fish passage;
- ◆ anadromous fish reintroduction schemes for the region above the Hells Canyon Complex proposed after the failure of Idaho Power Company to provide fish passage;
- ◆ recent mitigation measures & management actions implemented in other areas;
- ◆ possible reasonable and prudent measures relative to the legal responsibilities of Idaho Power Company pursuant to FERC re-licensing and ESA considerations;
- ◆ possible passage & watershed restoration solutions derived from the current scientific literature; and
- ◆ results of ongoing fish & habitat enhancement work in the Owyhee Basin with respect to presently available habitat for anadromous fish production.

C. The feasibility study would also explore alternatives outside the “natural system restoration” paradigm. It will consider the following alternatives, in addition to other options that may be identified in the research:

- ◆ a more rigorous resident fish substitution program; re-introduction of surplus (live) lower river hatchery salmonid brood stock for “trophy” fisheries in DVIR reservoirs;
- ◆ direct allocation of processed salmon from hatchery returns;
- ◆ off-site mitigation fisheries for the Tribal members below Hells Canyon Dam; and,
- ◆ monetary settlements for the Shoshone-Paiute Tribe.

g. Facilities and equipment

Refer to the “umbrella project” (ShopaiGD1.doc) for a description of *facilities and equipment*.

h. Budget

The personnel category is for the Director of Parks, Fish & Wildlife (0.33 FTE) to coordinate with regional entities on the issue of reintroduction of anadromous fishes into the Owyhee Basin and to oversee the legal research and fisheries feasibility study.

Fringe benefits are based on a 30% rate.

The Travel category is \$7,500 for coordination meetings with the Director, legal council, and fisheries consultant; and for travel to regional meetings with CBFWA, NPPC, BPA, and IPC.

The Indirect Costs of \$9,071 are based on 26.6% of the subtotal categories – excluding subcontracting.

The subcontractor category (\$13,680) is for legal research and council pursuant to Hells Canyon dam complex FERC re-licensing issues (40 hours*\$180) and fisheries consulting for conducting a feasibility study (80 hours *\$76).

Section 9. Key personnel

Refer to the “umbrella project” (ShopaiGD1.doc) for a resumes of *key personnel*. The following Sho-Pai staff and consultants will be implementing this specific sub-proposal:

Guy Dodson Sr., Shoshone-Paiute Director of Habitat, Parks, Fish & Game
Legal Council, to be named at a later date
Steven Vigg, Fisheries Consultant

Section 10. Information/technology transfer

Refer to the “umbrella project” (ShopaiGD1.doc) for a description of proposed *information and technology transfer* media and methods.

Congratulations!